

## INTERNATIONAL SEARCH REPORT

PCT/US 03/00741

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 H04R1/40 H04R3/00 //H04R5/027

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 869 697 A (LUCENT TECHNOLOGIES INC) 7 October 1998 (1998-10-07)	1-6, 9-12, 14, 15, 19, 21, 23-25, 27-36, 39-42, 44, 47-50
Y	page 3, line 44 -page 15, line 38 abstract	16-18, 20, 22, 45, 46, 51-57, 60-63, 65-75
A		7, 8, 13, 26, 37, 38, 43,
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

5 May 2003

Date of mailing of the international search report

03. 06. 2003

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	--- US 6 239 348 B1 (METCALF RANDALL B) 29 May 2001 (2001-05-29)  column 1, line 62 -column 3, line 31	58, 59, 64  16-18, 20, 22, 45, 46, 51-57, 60-63, 65-75
A	--- US 6 317 501 B1 (MATSUO NAOSHI) 13 November 2001 (2001-11-13) the whole document	1-75
A	--- EP 0 381 498 A (MATSUSHITA ELECTRIC IND CO LTD) 8 August 1990 (1990-08-08) the whole document -----	1-75

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			DE 69801785 T2	23-05-2002
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